AUTHOR INDEX

Agarwal, D. P. 69, 345
Ayesh, R. 387

Baillie, T. A. 85
Basile, A. S. 331
Belz, G. G. 109
Bertilsson, L. 85
Burk, R. F. 383

Gammal, S. H. 331
Goedde, H. W. 69, 345
Gonzalez, F. J. 1
Guengerich, F. P. 299

Hardy, K. J. 137
Howard, J. L. 403

Jones, E. A. 331

Kirch, W. 109
Kleinbloesem, C. H. 109

Lennard, M. S. 309
Levin, W. 153

Main, J. 373
Mullen, K. D. 331

Okey, A. B. 241

Pollard, G. T. 403
Pringle, T. H. 39

Reviriego, J. 85
Riddell, J. G. 39
Ryan, D. E. 153

Smith, R. L. 387

Thomas, H. C. 373
Tucker, G. T. 309

Weinshilboum, R. 93
Willner, P. 425

Young, H. A. 137

AUTHOR INDEX

Agarwal, D. P. 69, 345
Ayesh, R. 387

Baillie, T. A. 85
Basile, A. S. 331
Belz, G. G. 109
Bertilsson, L. 85
Burk, R. F. 383

Gammal, S. H. 331
Goedde, H. W. 69, 345
Gonzalez, F. J. 1
Guengerich, F. P. 299

Hardy, K. J. 137
Howard, J. L. 403

Jones, E. A. 331

Kirch, W. 109
Kleinbloesem, C. H. 109

Lennard, M. S. 309
Levin, W. 153

Main, J. 373
Mullen, K. D. 331

Okey, A. B. 241

Pollard, G. T. 403
Pringle, T. H. 39

Reviriego, J. 85
Riddell, J. G. 39
Ryan, D. E. 153

Smith, R. L. 387

Thomas, H. C. 373
Tucker, G. T. 309

Weinshilboum, R. 93
Willner, P. 425

Young, H. A. 137

SUBJECT INDEX

Acetaldehyde, acute reactions 358, 359
β-Adrenoceptor agonists
  cardioselectivity 39–59
    variation 41, 42
AHH inducibility 282–85
Alcohol *see* ethanol
Alcohol dehydrogenase pharmacogenetics 69–80
  allele frequency 74, 75
  classes 71–73
  evolution 78
  function 78–80
  gene expression 77
  isoenzymes, immunological relationship 75, 76
    structure 76, 77
  multiple forms 73
  phenotypes 74
Aldehyde dehydrogenase (ALDH) 345–65
  alcohol abuse 364
  classes 346, 347
  deficiency and alcohol use 361, 362
  genetic variants 352–57
  importance 357–62
  isoenzyme structure 351, 352
  polymorphism 356
  structure–function 357
  substrate specificity 349, 350
  subunits 350
  tissue distribution 347–49
Aldehyde dehydrogenase 2 (ALDH2) abnormality
  and alcohol use 362
  incidence 363
Aldehydes, metabolism 345, 346
Animal models, depression 425–44
Anxiety 403, 404
  drug effects 404
Anxiolytics
  neurochemistry 414
  operant models 405–13
  screening 403–17

Benzodiazepine structure 86

Calcium antagonists, drug interactions 109–30
  ace inhibitors 122
  β-adrenergic antagonists 118–22, 127
  antipyrine elimination 122, 123
  carbamazepine 126, 127
  cardiovascular drugs 113–18
  cyclosporin 123
  cytostatic drugs 128, 129
  halothane 129
  H_2-receptor antagonists 124, 125
  insulin 130
  lithium 129
  mechanisms 111
  NSAIDs 129
  pharmacokinetics 110, 111
  phenytoin 127
  prazosin 122
  quinidine 118
  rifampicin 125
  sulfinpyrazone 126
  theophylline 127, 128
Carcinogenesis, AHH induction 282–85
Cardioselectivity
  advantages 52–58
  diabetes mellitus 56, 57
  fatigue 58
  hypoglycaemia 57, 58
  peripheral vascular effects 54–56
Cardioselectivity assessment 42–52
  finger tremor 48, 49
  forearm blood flow 47, 48
  heart rate 45, 46
  metabolic parameters 49, 52
  respiratory function 44, 45

Davidson–Cook procedure, drugs and punishment 408
Debrisoquine 4-hydroxylation 214, 215
Depression
  animal models 425–40
  antidepressant responses 427, 428
  behavioural despair 436–38
  brain damage models 442–44
  monoamines 429–31
  non-simulation models 431–33
    circadian rhythm 433
  physiological basis 445, 446
  separation models 440–42
  stress models 434–40
    learned helplessness 434–36
  symptomatology 425, 426
  theories 428–31
Diazepam metabolism
  factors affecting 85–90
    environmental 87, 88
    genetic 88–90
  pathways 86
Diet and pharmacogenetics 387, 388
cDNA-expression libraries 2
cDNA, uses in research 3
Drug interactions, calcium antagonists 109–30

Enantioselectivity 309
  absorption 309, 310
  clearance 312
    biliary 315, 316
    renal 315
  distribution 310–12
  inversion 314, 315
  metabolism 312–14
Enantiomer-specific pharmacokinetics 309–25
  benefits 316–18
  drug–drug interactions 323–26
  potency ratios 318, 319
  routes of administration 320
  toxicity testing 322, 323

Ethanol
absorption 69, 70
adverse reactions 359
biological sensitivity 359–61
mammalian 70–75

Fish odour syndrome *see* trimethylaminuria
Flumazenil
hepatic encephalopathy 331–40
structure 332
Free radical injury, selenoenzyme protection 383–85

Geller–Seifter procedure, drugs and punishment 407
Glutathione peroxidase, lung tissue 303, 304
Glutathione *S*-transferase, lung tissue 302, 303

Hepatic encephalopathy
animal models 336–38
and flumazenil 335–40
GABAergic transmission 335
human studies 338–40
Hepatitis B infection
acute 373
carriers 373
chronic 373
patient assessment 374
treatment options 374–78
combination 378

Interferon-γ 137–45
agents inducing 138–41
agents inhibiting 141, 142
gene expression 142–45
producer cells 137, 138

Lung tissue xenobiotic metabolism 299–304

S-Methylphenytoin 4-hydroxylase 216, 217
Molecular genetics, P-450 superfamily 1–25

NADPH-cytochrome P-450 reductase, lung tissue 301, 302
Nifedipine oxidase 217, 218

P-450
ancestral genes 3
bacterial genes 19
cDNA in vaccinia virus 24
expression, species differences 20, 21
genes
regulation 23
sequences 9
phylogenetic tree 6, 7
polymorphic expression 21–23
sequenced protein 4, 5
steroid synthesis 17, 18, 199–203
structure 7
support genes 19, 20
yeast genes 18, 19
P-450, hepatic microsomal cytochrome-amino terminal sequence analysis 177–80
antibodies
identification P-450 187–94
inhibition 203–206
monoclonal 185–87
polyclonal 183–85
assay 168, 169
catalytic properties 194–206
conserved cys-containing peptides 180, 181
detergent removal 169, 170
electrophoresis 170–77
high performance liquid chromatography 167, 168
human, characteristics 214–21
hydrophobic chromatography 164, 165
hydroxyapatite chromatography 166, 167
ion-exchange chromatography 163, 164
isoelectric focussing 172–77
isoenzyme induction 191
lung tissue 299–301
mouse, characteristics 211–14
peptide mapping 181–83
protein ligand chromatography 165, 166
purification P-450a–P-450k 155–60
elution profile 157
nomenclature 160–62
schemes 157, 158
rabbit, characteristics 206–11
solubilization 162, 163
spectral properties 175
steroid metabolism 17, 18, 199–203
progesterone 201
structural properties 170–94
substrate selectivity 194–99
P-450 induction 241–86
agents 245–47, 255
structure 246
cancer 282–85
chemoprophylaxis 285
detection 241–43
drug interactions 280, 281
endogenous compounds 279, 280
ethanol 259, 260
hepatic toxicity 281
human 268–75
placenta 271
tissues 270–75
magnitude 246
mechanism 243–68
overlap in inducers 260–62
PCN/glucocorticoids 257–59
phenobarbital-like compounds 255–57
phylogenetic breadth 276–79
physiologic 279
probe drugs 268, 269
receptor 247–55
regulation 263–67
suppression 267, 268
tissues 265
P-450 HFLa 219
P-450HLj 219, 220
P-450I gene family 8–10
P-450III gene family 14–16
P-450IV gene family 16, 17
P-450IIA gene subfamily 10
P-450IIIB gene subfamily 11
P-450IIC gene subfamily 11–13
P-450IID gene subfamily 13
P-450IIE gene subfamily 13, 14
P-450 superfamily
genes 1
molecular genetics 1–25

Phenol sulfotransferase (PST)
biochemistry 93
pharmacogenetics, platelet 96–104
activity 96–100
thermal stability 100–104
stability 95
thermal stability inheritance 102
Punished behaviour
drinking suppressed 413, 414
drugs in rats 415, 416
drug effects 403–407
monkey 410, 412
pigeon 411
rat 407–409
operant responding suppression 404–13

Receptor, α-adreno distribution 40
Receptor, β-adreno
classification 39–41
distribution 40
Receptor, Ah 247–55, 282
characterization 251
model of action 248–55
Receptor, GABA/benzodiazepine 331
and flumazenil 333–35
scheme 332

Selenoenzymes protection of free radical injury 383–85
Stress types and depression 434–40
Sulfotransferase *see also* phenolsulfotransferases
pharmacogenetics 93–105

Trimethylamine
metabolism 391
precursors 390
toxicology 397, 398
Trimethylamine *N*-oxidation
genetic aspects 392
genetic polymorphism 387–99
metabolic effects 398, 399
Trimethylaminuria
case examples 392–94
management 394, 395
primary 389–95
secondary 395–97